

LOGARITHMIC AND INVERSE LOGARITHMIC CONVERSION SYSTEM AND METHOD

5

ABSTRACT

A system and method is provided for determining a logarithm of an input value and a system and method for determining an inverse logarithm for an input value. The system and method determine an integer value relating to the logarithm and performs a linear interpolation over a range relating to the integer value. A mantissa value is produced from the linear interpolation and corrected over one or more correction stages. The inverse logarithmic system and method receive an input value comprising an integer value and a mantissa value. The mantissa value is precorrected over one or more precorrection stages. The precorrected mantissa is then combined with a value related to the integer value and multiplied by a restoration factor to produce the inverse logarithm.

10

15